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# THE HOME OF PACIFIC STRAINS

*1940 Catalog*

VETTERLE & REINELT  
HYBRIDIZING GARDENS  
CAPITOLA • CALIFORNIA





## TO OUR PATRONS

We are indebted to you who have contributed to our success in business and made it possible for us to experiment with breeding and improvement of plants on a larger and larger scale. . . . The process of breeding, selecting and eliminating is naturally slow, and no spectacular achievements can be had overnight. The higher the standard, the harder and costlier it is to bring further improvement. . . . Our appreciation can best be expressed by giving you each year better value and higher quality for your money than we have been able to do before.



**TERMS** . . . Cash with order or satisfactory references. Seed and tubers are shipped prepaid within the United States. Add 25c for postage and packing on orders of plants or tubers amounting to less than \$2.50. Plants are shipped by express, charges collect. Canadian customers will kindly procure permit from the Department of Agriculture, Ottawa, before any plants or tubers can be imported. No permit is required for seed. All stock guaranteed true to description but no guarantee for the result of growing, over which we have no control. *California state sales tax of 3 per cent must be paid on all retail orders from California.*



### JOIN AMERICAN BEGONIA SOCIETY

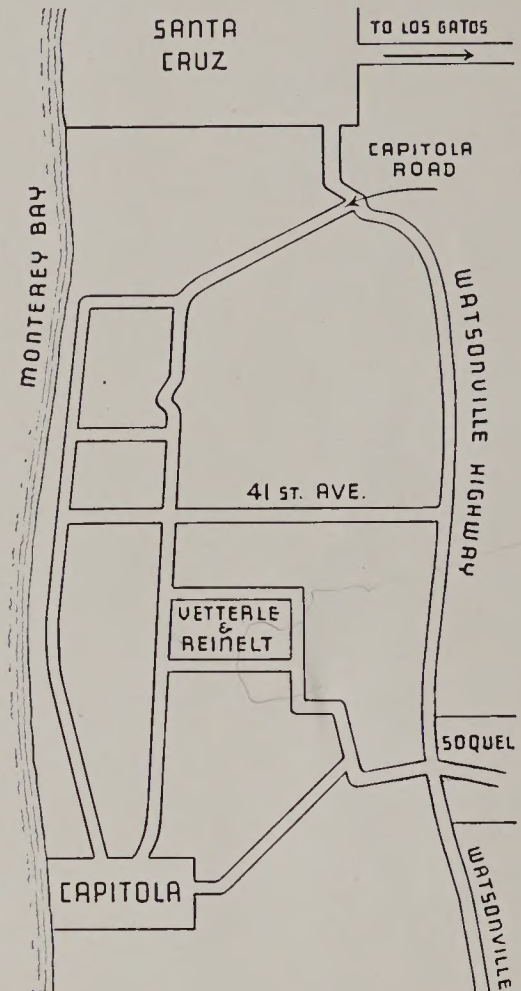
Descriptive bulletins on culture of all Begonias are issued monthly. Membership, \$1.00 per year. Write to

#### AMERICAN BEGONIA SOCIETY

1732 Temple Avenue

Long Beach, California

## HOW TO GET THERE



**VISITORS** are cordially invited to inspect our plantings during the season. The Polyanthus Primroses are at their best during March and the first part of April. . . . In April and May the first crop of Delphinium seedlings is at its height. . . . Breeding stock of tuberous Begonias and Gloxinias in our greenhouses is at its best in June and July. . . . In August and September over a million seedlings of tuberous Begonias can be seen in full bloom in our lath houses . . . New crops of Delphinium seedlings are brought into flower during August and September . . . We are situated four miles out of Santa Cruz, as can be seen on the map. When coming from Santa Cruz, take the first side road to the right when past city limits and follow it to our nursery. . . . If coming from Watsonville, turn left in Soquel, as indicated on map.





*Display of Tuberous Begonias in One of Our Greenhouses*



# SINGLE TYPES OF TU

**HISTORY** . . . Tuberous Begonias were discovered and introduced into cultivation about 1860. . . . The species from which the modern hybrids evolved are all natives of South America. These are found growing, although in the tropics, at altitudes of from two to six thousand feet. This naturally makes them subjects for temperate zones, with cool growing conditions. . . . The original species all had comparatively small flowers, the largest of which reached four inches in diameter. Colors were confined to white, red, yellow and pink. . . . It took eighty years of patient labor and several generations of hybridizers to bring the tuberous Begonias to the state of perfection in which they are today. Through cross-breeding new forms were gradually developed and finally double flowers. . . . Today they are segregated into separate types and colors, the wealth of which is simply amazing when one considers the four original ancestors.



## SINGLE NARCISSIFLORA TYPE

*(Above)*

A new form recently developed. The flowers resemble somewhat the trumpet daffodils, hence its name. Daffodil flowered. Very effective as a pot plant.

**Colors** . . . Yellow Salmon Shades, Salmon Shades, Orange Salmon Shades, Red Shades.



## SINGLE CRESTED TYPE CRISTATA

*(Right)*

The accompanying picture speaks for itself as to the beauty of this type, which we have highly improved in recent years. Dwarf, stocky growth, with masses of flowers, makes this type suitable both for bedding and show purposes.

**Colors** . . . Pink Shades, Rose Shades, Crimson Rose, Salmon Shades, Yellow, Orange, Scarlet, Dark Red.



## PRICE OF

**TUBERS** . . . Delivery, January to March.

Large size, 20c each; \$2.00 per dozen; \$14.00 per 100.

Medium size, 15c each; \$1.50 per dozen; \$10.00 per 100.



# BEROUS BEGONIAS

**DEVELOPMENT IN AMERICA** . . . In Europe, tuberous Begonias enjoyed enormous popularity years before they were well known in America. It is only in recent years that they were begun to be grown commercially in this country in large quantities. . . . We were the first to begin breeding them on a commercial scale, and the fact that flowers of our strain have always been winners wherever exhibited is very encouraging. . . . The enthusiastic comments on our work by both European and American authorities in a number of nationally-known magazines speaks for our efforts and our strain. . . . Over two million plants are grown annually and the very finest new seedlings each year are used as the seed bearers for the next year's crop. . . . Thousands of enthusiasts make the annual pilgrimage to see the exhibit of our breeding stock in the greenhouses when they are at their best, during June and July.



## GIANT SINGLE TYPE

*(Above)*

The individual flowers of this group often reach astonishing size of from 8 to 12 inches in diameter; carried on strong, stiff stems. They are very decorative as large specimen plants in tubs or for bedding purposes, where they will form a solid sheet of color.

*Colors* . . . White, Pink, Rose, Salmon, Yellow, Orange, Scarlet, Dark Red.



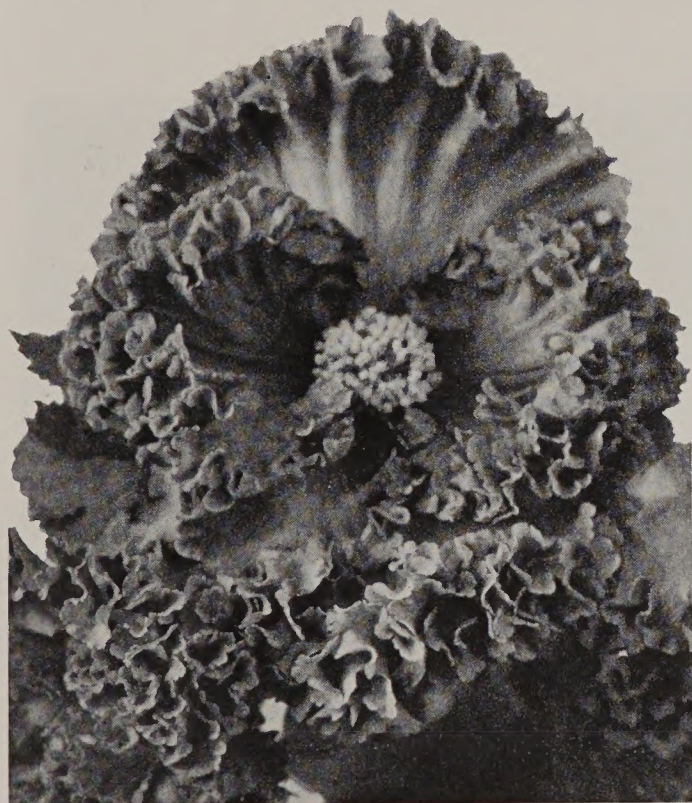
## SINGLE FRILLED TYPE (CRISPA)

*(Left)*

Perhaps the most adorable of the single types. The large, individual flowers are beautifully frilled and ruffled at the edge.

*Colors* . . . Solid Colors: White, Pink, Yellow, Orange, Scarlet, Dark Red. Variations: Rose, Crimson Rose, Light Salmon, Dark Salmon, Apricot.

*Fascination:* On cream background, edged in rosy red.



## SINGLE TYPES

**SEEDLING PLANTS** . . . Delivery, May-June. \$1.00 per dozen; \$7.50 per 100.

**SEED** . . . 50c per packet; 25c per half packet.





**DOUBLE CAMELLIA TYPE . . .** (*Above*) The largest and most popular of the double types. Individual flowers, from 5 to 8 inches in diameter, resemble camellias and roses in all forms and variations of color.

*Colors . . .* Solid, uniform colors, with slight variation only: White, Pink, Rose, Crimson Rose, American Beauty, Salmon Red, Cardinal Red, Scarlet, Dark Red, Yellow, Orange, Flame Orange.

*Salmon Shades . . .* Varying more or less within themselves: Blush and Pink Salmons, Yellow and Apricot Salmons, Apricot and Orange Salmons, Salmon Rose.



**DOUBLE CAMELLIA PICOTEE SHADES . . .**

(*Right*) This group was developed by crossing the large Camellia with the small Marmorata type. The flowers are slightly smaller but of beautiful camellia form, with two-tone combinations of color strongly pronounced in a definite contrasting edge.

*Colors . . .* Red Picotee, Rose Picotee, Apricot Picotee, Salmon Picotee.

# DOUBLE TYPES OF TU

**SEED . . .** Seed of all types of tuberous Begonias listed on pages 4, 5, 6, 7 and 8 is available either in straight colors or any desired mixture. . . . To produce high-quality seed only the very finest members in each class are used as parents. After thorough testing they are artificially cross-pollinated, as only by this method are we able to control the hereditary factors and produce seed that is in a class by itself.

**TUBERS . . .** All of our tubers are produced annually from seed and ripen with us approximately in December. The size will vary anywhere from one to three inches in diameter. However, the size and quality of flowers is not governed by the size of the bulb. For commercial distribution they are graded into two sizes: large, which is from two inches up; and medium, from one and a half to two inches. . . . The larger the tuber is, the larger the individual plant will be, but this does not mean the flower.



## PRICE OF

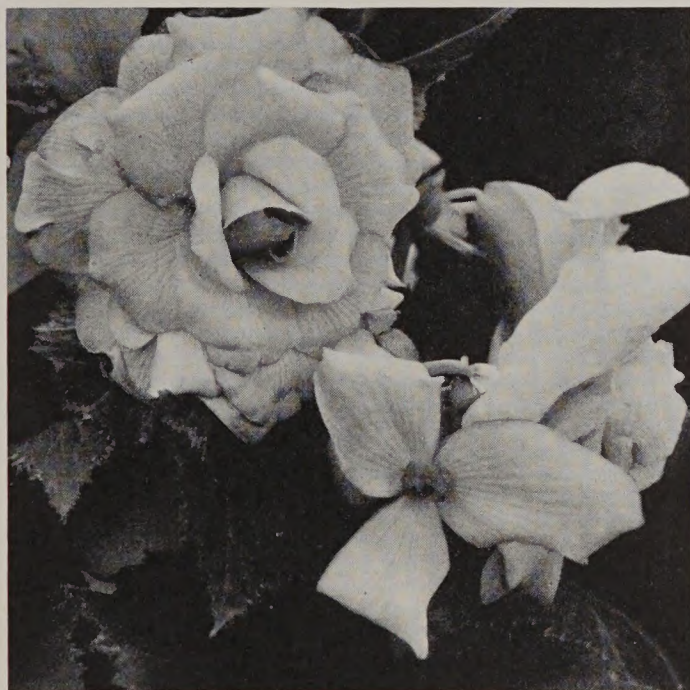
**TUBERS . . .** Delivery, January-March.  
Large size, 25c each; \$2.50 per doz.; \$18.00 per 100.  
Medium size, 20c ea.; \$2.00 per doz.; \$14.00 per 100.



# BEROUS BEGONIAS

**SEEDLING PLANTS** . . . To those customers who have no facilities or time for starting tubers, we offer from the end of May to end of June young seedling plants. These are transplanted twice and hardened off outdoors before shipping and upon arrival can be planted directly outdoors in beds or pots as desired. They will start flowering in July and form large plants very rapidly and carry the season of bloom deep into autumn. Regions with hot summers and long, warm autumns will get better results from seedling plants than from tubers. They can be successfully shipped to any region in the United States.

**CUT FLOWERS** . . . Tuberous Begonias are excellent cut flowers, lasting five to six days if placed in shallow bowls or plates in water. The double types are more lasting, hence preferable for table decorations or corsages. We ship fresh flowers from June 1 to October 15 to any point in the United States. Twelve large blooms of assorted colors are conveniently packed in cotton, forming a beautiful gift box. The price of individual boxes is \$2.00, f. o. b. Capitola.



## DOUBLE TYPES

**SEEDLING PLANTS** . . . Delivery, May-June. \$1.50 per dozen; \$10.00 per hundred.

**SEED** . . . \$1.00 per packet; 50c per half packet.



**FIMBRIATA PLENA TYPE** . . . (Above) Double frilled, or often called carnation type. This group has been enormously improved in the last few years, the flowers reaching in some cases the size of the camellia type with more and more refined form. Its strong, bushy growth makes it exceptionally desirable for bedding and pot plants.

*Colors* . . . Solid Uniform: White, Yellow, Orange, Scarlet, Dark Red, Crimson Rose, Salmon Red. With Variations: Blush, Pink, Rose, Apricot, Light Salmon, Dark Salmon.



**DOUBLE ROSEBUD TYPE** . . . (Left) Flowers of the most exquisite form, resembling perfect rosebuds, with beautiful, two-tone pastel-shade coloring. Very tall, sturdy growth makes it especially desirable for growing large specimen plants in tubs for decorative purposes.

*Colors* . . . Pastel Shades: Blush, Pink, Rose, Flame Salmon, Light Salmon, Dark Salmon.





**DOUBLE HANGING TYPE** . . . Perhaps the most attractive type of tuberous Begonia. The hanging habit, with great masses of blooms, makes them favorite for decoration of greenhouses, open verandas or sun porches where they can be protected against the wind.

*Varieties with large flowers . . . Colors . . .* Pink Shades, Rose Shades, Crimson Rose Shades, Salmon Shades.

*Varieties with small to medium sized flowers . . . Colors . . .* White, Salmon Shades, Flame Orange, Yellow, Apricot Shades.

### PRICE

**TUBERS** . . . Delivery, January to end of March.

Large size, 25c each; \$2.50 per dozen; \$18.00 per 100.

Medium size, 20c each; \$2.00 per dozen; \$14.00 per 100.

**SEEDLING PLANTS** . . . \$1.50 per dozen; \$10.00 per 100.

**SEED** . . . \$1.00 per packet; 50c per half packet.

### NAMED VARIETIES

We have been selecting and propagating a number of seedlings of the basket Begonias which are outstanding in color, form of flowers and hanging habit. All are propagated by cuttings, forming rather irregular tubers in comparison to the seedling tubers which are smooth and round. . . . It takes several years to propagate a sufficient amount of tubers for introduction and we are so far able to offer only the two following varieties.

*Pink Shower* . . . The individual flowers are a delicate cerise-pink, holding the beautiful form to the very end of the season in such profusion that the plant portrays the name it bears exactly.

*Avalanche* . . . Our new introduction for this year and a good companion to Pink Shower, as it is almost a white counterpart of it. A slight greenish tinge in the center of the flowers gives it added attraction.

**PRICE** . . . 75c each; \$7.50 per dozen.





## **SPECIAL . . . CHOICE SELECT VARIETIES OF TUBEROUS BEGONIAS**

During flowering season we select and mark all the choicest new seedlings which are above average in size, form and color. We are offering tubers of these to connoisseurs who desire only the finest for their gardens. For show purposes and greenhouse decoration they are the last word in tuberous Begonias. In this group we supply all of the double types and colors listed on the previous pages, besides including also all the new color developments derived from our crosses

preliminary to introduction. . . Besides the double Camellia "*Apple Blossom*" shades, which are supplied in this group only, we offer also this year a new color in the double rosebud type, namely, "*Flame Salmon*" shades, an unusual color not previously seen in tuberous Begonias.

**PRICE . . .** Tubers, delivered January to March.

Large size, 50c each; \$5.00 per dozen; \$37.50 per 100.

Medium size, 40c each; \$4.00 per dozen; \$30.00 per 100.



# TUBEROUS BEGONIAS (Multiflora Nana)

This group of tuberous Begonias which we are offering this year are not exactly new. However, they have not been distributed or grown in America with the popularity which they rightly deserve, as they have been in Europe for the last twenty-five years. . . . They differ from the large-flowered types in having a dwarf, bushy growth covered all summer with a mass of small double flowers  $1\frac{1}{2}$  to 3 inches in diameter. The character of their growth makes them invaluable for borders or bedding purposes, as they form a veritable carpet of single color. . . . All varieties are propagated artificially, by cuttings only, as seed from them does not come true to type or color. In this manner the bulbs offered are divisions of the original plant and members of individual variety, forming absolutely no variation.

**FIREFLAME** . . . Flamboyant. Small semi-double flowers of the most intensive scarlet. The plants grow only four to six inches high and are simply covered with blooms from June to the end of October. It can be utilized both for bedding and hanging baskets.

*Price* . . . 25c each; \$2.50 per dozen; \$18.00 per 100.



**MRS. HELEN HARMS** . . . Pure yellow double. A very dwarf, bushy growth; outstanding for borders or bedding.

*Price* . . . 35c each; \$3.50 per dozen; \$25.00 per 100.

**MME. RICHARD GALLE** . . . Pure orange double. Almost identical with Mrs. Helen Harms, except for color, which is clear orange.

*Price* . . . 35c each; \$3.50 per dozen; \$25.00 per 100.

## CULTURE OF TUBEROUS BEGONIAS

Natural state, Central and South America. . . . Planting time, January to May. Flowering time, May to November.

**SEED** . . . Sow from January to March. Place one or two inches of gravel in flats or seed pans, to insure good drainage, over which place a fairly coarse mixture of two-thirds leaf mold and one-third peat, about one inch deep. Smooth the surface with the same mixture, finely sifted, not more than one-eighth inch deep but do not press it down. It is necessary for the surface to be of a spongy character, so that when the seed germinates, the young roots can get into it. If surface is too fine and packed, the seedlings will often fall over, as the young roots are unable to get in. . . . Place the pans in shallow water until thoroughly soaked up from below, then broadcast the seed. Cover with glass and a sheet of paper or keep it in the dark until germination takes place. Night temperature of 65 to 75 degrees Fahrenheit is necessary for quick germination. Lower temperature than 65 degrees will considerably slow up germination, with poorer results. . . . As soon as germination takes place, take the paper off and in three or four days lift the glass also, otherwise the little seedlings will get too spindly. Warm temperature, protection from direct sunlight, and uniform moisture, are absolutely necessary. Even a slight drying out of the surface will be fatal to the delicate young plants. Very gentle overhead watering should be used when necessary. . . . Dampening off will occur only if flats are kept too wet in greenhouse without proper ventilation. Watering with a weak solution of Clorox, about 4 to 6 per cent, we found as best cure and preventive.

**TRANSPLANTING** . . . When the third leaves are developed, transplant one inch apart in flats containing the same mixture as for sowing. No finely-sifted surface is necessary any more. Do not put more than one to one and one-half inches deep of soil in your flats. Deep flats filled with several inches of soil are not necessary. Usually they do not drain well, soil will get sour, and checking of the growth will be the result. Before they get too crowded, transplant in the same manner again farther apart, until strong enough to be planted out in the open or, if desired, potted up. . . . If planting in open ground, enrich the soil liberally with well-rotted cow or sheep manure and a sprinkling of bone meal. If soil is heavy, add plenty of either leaf mold, peat or sand or a mixture of all, so that the ground will be light and porous. Plant in a shaded position, such as under the trees or north side of the house, where direct sunlight cannot reach them. Keep well watered, fine overhead sprinkling preferred.

**FEEDING** . . . If a very strong growth is desired, additional feeding can be given when the plants reach approximately four to five inches in height, either by the sprinkling of one-half teaspoonful of ammonium phosphate around each plant or approximately a heaping teaspoonful of cottonseed meal, which should be worked into the soil slightly, not too close to the stem. This dose will usually prove sufficient for the whole season but can be duplicated again later in the summer when the plants are in full bloom, which will prolong the flowering season to some extent.



**DIGGING AND STORAGE** . . . In autumn, when the foliage turns yellow, withdraw the water gradually and when all growth dies down entirely, take out, wash off all soil, taking care not to bruise the tubers, dry in sunlight for a day or two until thoroughly dry, then store in open flats in cool, dry place. See that all particles of the old stem are removed until healthy tissue shows; otherwise, if left on, they will decay and destroy the tuber.

**TUBERS** . . . If early flowering is desired, place tubers during January and February in a warm place in open flats, moisten slightly once in a while and gradually, as they begin sprouting buds, plant in flats filled with peat, only about three inches apart, according to the size of the tuber, so that they are only slightly covered. Keep uniformly moist but not too wet, in a warm place, well lighted, until three or four inches of growth develops; then plant in pots or permanent position as desired. The front is always where the tips of the leaves are pointing. Often, if dormant tubers are planted in the open ground, especially if it is cold and too wet, numbers of them rot and the planting will be uneven, some coming earlier, some later, and facing haphazard way. Started first in peat, they will develop splendid root systems, which are necessary for developing good specimens.

**POT CULTURE** . . . For pot culture, any rich, light soil is suitable. Mixture of two parts of coarse leafmold, one part of loam will bring good results. It is important for mixture to be of light, coarse character, so that it will drain well. Finely-sifted soil will pack down without permitting the circulation of air, hence only a moderately good result can be expected. Perfect drainage is most important, and to provide it, place at least one inch deep of gravel on the bottom of the pot. When potting up, use smaller pots in beginning and move later into larger pots before they are pot-bound. If tubers are well started in peat, with considerable root system, they may be planted immediately in large pots approximately from six to eight inches for one-year-old tubers. Older, larger tubers will, of course, require larger pots. Very great care with watering is necessary when they are planted immediately in large pots. Keep the surface only moist in the young stage, until the growth is well developed, and then heavier watering is justified. If you over-water the soil in the beginning, it will become sour, the plants will make only a sickly growth, buds will fall off before blooming and the plants may die out entirely. This is true especially of hanging basket types. If very strong growth is desired, it will be necessary when the plants are established in the final pots and have at least four of the leaves developed, to water once a week with liquid manure.

**FEEDING** . . . A number of quick-acting, commercial fertilizers can also be used. One of the safest is cottonseed meal, which we are using now almost exclusively, as it gives very

good results. Half a teaspoonful, one or twice during the season, sprinkled around the edge of the pot (not too close to the stem) will be sufficient. Heavier doses will do more harm than good, often causing distortion in the flowers or burning up the roots, destroying the plant entirely. Lath houses with strong muslin roofs are a very suitable place for development of show specimens in warm regions where greenhouses would be too warm. If grown in a greenhouse, thorough ventilation day and night must be available. Openings in the walls, under the benches, will give good circulation of air. On hot days, heavy shading and sprinkling the walks with water will keep the temperature down. 65 to 80 degrees Fahrenheit is the most ideal temperature, for as the cooler and slower they develop, the finer and larger the flowers will be. Higher temperatures produce quick, weak growth, and the flowers do not develop as good size and as lasting quality.

**PRUNING** . . . Do not prune begonias. Any open wound will be immediately attacked by fungus, especially when crowded, without good air circulation. If you cut the flowers, cut only half of the stem. The other half will mature and fall off itself without leaving a wound.

**BASKETS** . . . If well-balanced hanging baskets are desired, pick off all buds until the growth is enough advanced and the branching develops. Some hanging types are quite strong growers and if only one to three stems are on the tuber, they should be pinched off when first bud appears, to induce the side shoots to develop.

**PESTS** . . . Occasionally Begonias are attacked by aphid and thrip in the greenhouse, if kept in dry, close temperatures. Fumigating with nicotine on two or three alternate evenings will control these pests easily. Very rarely they are also subject to mite attacks. These are very small and cannot be seen without a lens. The first signs of their presence are brown, rusty streaks on the young shoots and foliage, deforming and destroying the season's growth entirely if not checked. Infected plants should be isolated immediately. Thorough spraying with Volck will check this pest.

**FAILURES** . . . The most common failure in Begonias is the falling off of buds before they develop, which is caused either by the plants being grown in too small pots without a sufficient amount of food, severe drying out or severe over-watering. In hot weather the flowers develop too rapidly and the plants, by drawing much more water from the soil, tend to throw off the buds. Abundant growth, with little or no flowers, is the result of too heavy shade. Curled and shiny foliage is a sign of too strong an exposure to the sun. The most damage is done by over-feeding; the first signs of it are a soft, glassy texture of the foliage, curling under gradually, wilting and dying off.



# WINTER FLOWERING TUBEROUS

An entirely new group of tuberous Begonias developed in England by crossing B. Socotrana with large-flowered tuberous Begonias. Their cultural requirements are slightly different, yet simple. Their chief asset is the flowering season, which can be extended from October to the end of January. The fact that they will grow very well in the house will insure them extreme popularity. The accompanying picture was taken after the plant was displayed three weeks on mantle shelf in a living room in December. . . . All varieties in this group have to be propagated by cuttings, as the plants do not form seed. The cuttings form tubers in their second year. Due to scarcity of stock, we supply only strong, young plants produced from cuttings from five-inch pots by September 1. Flowering specimens in November and December are \$1.00 more per individual plant as quoted for September plants.

## SINGLE VARIETIES

*Conquest* . . . . . each, \$ .75  
A very strong grower, with dark green foliage, bearing large trusses of single, orange flowers, shaded slightly with rose.

*Clibrans Red* . . . . . each, \$ .75  
Perhaps the best of the single, red varieties, the color being ox-blood red.

*Exquisite* . . . . . each, \$3.00  
A dwarf variety, with beautifully-formed flowers, tinged pale pink on a cream ground; fully deserving its name.

*Fascination* . . . . . each, \$2.00  
The most outstanding of all single varieties; simply covered with clear, apricot-salmon flowers. A very fine grower and rapid increaser.

Collection of four single varieties . . . . . \$5.00

## DOUBLE VARIETIES

*Apricot Beauty* . . . . . each, \$1.00  
Large trusses of small double flowers edged deeper apricot on a creamy apricot ground.

*Emily Clibran* . . . . . each, \$1.00  
Slightly deeper color than Apricot Beauty.

*Lady Roberts* . . . . . each, \$1.00  
A creamy white showing green tinge in the center of flowers at the beginning of the season.

Collection of above three . . . . . \$2.50

*Eclipse* . . . . . each, \$2.00  
Its salmon-red semi-double flowers are produced in great profusion with slightly hanging habit. This variety was shown on the Sunset Magazine cover two years ago.



*Dazzler* . . . . . each, \$2.00  
As its name implicates, it is a brilliant scarlet with an ideal type of growth for Christmas decoration.

*Rose Queen* . . . . . each, \$2.00  
The form of flower resembles that of Sweet Pea and the whole plant looks like a single bouquet when in full bloom.

Collection of above three . . . . . \$5.00

*Charming* . . . . . each, \$3.00  
A beautifully formed flower like perfect camellias of deep rose-pink color.

*Pink Perfection* . . . . . each, \$3.00  
One of the most outstanding double varieties bearing large trusses of pure shell-pink flowers as above picture illustrates.

*Brittania* . . . . . each, \$3.00  
Brilliant scarlet, the individual flowers having form of camellia. The finest of the red varieties.

*President* . . . . . each, \$3.00  
The largest flowered of the double varieties, rosy-red in color, and a very robust grower.

Collection of above four . . . . . \$10.00



# BEGONIAS (Socotrana Hybrids)



## CULTURAL DIRECTIONS

**SOCATRANA HYBRIDS** . . . The culture of the Socatrana hybrids differs slightly from the summer-flowering tuberous Begonias. Originally they were produced by crossing Begonia Socatrana with tuberous Begonias. All the offsprings are sterile and have to be propagated artificially by cuttings.

**PROPAGATION BY CUTTINGS** . . . Young shoots, formed in the axils of the leaves in April and May when the resting period is over, may be cut when approximately two to three inches long with the basal ring and rooted in sand. If bottom heat is available, they will root within two or three weeks. Under cooler conditions they will root a little slower but very freely. They should be kept close and heavily shaded but as soon as they begin rooting, ventilation should take place. Potted up in three-inch pots, they will begin growing freely if kept either in the greenhouse or out-of-doors in a lath house. Before becoming pot-bound they should be transplanted into larger pots, as necessary during the summer, and pinched once or even twice to prevent them from blooming too early and to form a nice, bushy growth. In this manner cuttings rooted in June will require approximately six- to seven-inch pots by September. Those rooted in July will finish in smaller pots.

**FLOWERING SEASON** . . . By October the plants will commence to bloom and will continue to do so throughout the winter, if kept at a temperature of 60 to 65 degrees, which suits them best during the flowering season. When the flowering period is over, the plants rest from the end of January until the end of March. At this time water should be given very carefully, just sufficient to retain the stems and leaves; if too much is allowed, rot may set in. On the other hand, if insufficient water is given, the stems and leaves fall away and the plant is much less ready to commence growth when required. Early in April, when growth recommences, water can be given more freely.

**HOUSE CULTURE** . . . Those who have no greenhouse facilities may grow these Begonias in pots out doors well protected against the sun but giving sufficient light to prevent them from being spindly. When cool weather approaches in October they may be transferred into the house where if given sufficient light they will bloom very freely, especially if kept in a cool, dry temperature.

**TUBERS** . . . When plants attain an age of two years the tubers are sufficiently large to shake out of the soil for a resting period.

These can be restarted in May in a mixture of coarse sand and leafmold and potted up later as described for cuttings. Several shoots will appear on the tuber, some of which may be cut off with the basal ring and rooted in the same manner as the shoots from leaf axils. Individual leaves can be cut off and rooted in sand but the percentage of them forming plants is comparatively small and varies with the variety.

**SOIL** . . . The mixture best suited for these Begonias consists of two parts of loam, two parts of leafmold and one part of sand. A sprinkling of bone meal added will be beneficial. For the final planting one part of well rotted manure can be incorporated into the soil. Always see that the soil mixture is coarse and light, and pot lightly at all times.

**PESTS** . . . Rusty foliage is a sign that the mite is present, or a species of thrip. Both can be exterminated by fumigation or spraying with nicotine. Aphis will attack some of the varieties under greenhouse conditions; these too can be exterminated in the same manner. Syringing twice a day during the summer growth will keep these pests down if grown out of doors. Under greenhouse conditions keep the temperature quite moist with good ventilation, seeing that the foliage is always dry before evening, otherwise rot may take place.



# GLOXINIAS

Planting time January to March—flowering season from May to November. Semitropical plants mostly from Brazil and other parts of South America. The beautiful flowers of velvety texture make the plants popular subject for greenhouse and sunroom decorations . . . We have been crossing and re-selecting both the standard varieties with solid colors and the new Tigrina hybrids to such extent that we can offer superior strain of this exotic flower.



**STANDARD VARIETIES IN SOLID COLORS** . . . The varieties offered in this group are the best selected after extensive trials from sources all over the world. They are constantly being improved by crossing and re-selection every year.

*Carmen* . . . Large flowers averaging 5 to 6 inches in diameter carried erectly on strong stems. Bright crimson rose with white throat.

*Mount Blanc* . . . Clear glistening white.

*Blanche de Meru* . . . Pinkish rose, white throat.

*Etoile de Feu* . . . Light scarlet, compact growth.

*Roi Des Rouges* . . . Brilliant crimson scarlet, huge flower beautifully frilled.

*Princess Elizabeth* . . . Light blue, white throat.

*Violecia* . . . Soft violet.

*Prince Albert* . . . Darkest violet, beautifully frilled.

*Emperor William* . . . Violet bordered white.

*Emperor Frederick* . . . Scarlet bordered white.

**TIGRINA VARIETIES** . . . For size and beautiful form of flowers they are superior to the standard varieties with greater variation of shades and lace-like beautiful markings.

*Colors* . . . Pink Shades, Red Shades, Rose Shades, Blue Shades, Crimson Rose Shades, Violet Shades.

**PRICE** . . . Tubers of large size 35c each; \$3.50 per dozen; \$25.00 per 100. Medium size 25c each; \$2.50 per dozen; \$18.00 per 100.

**CULTURE OF GLOXINIAS** . . . Native of South America requiring warm, moist temperature; flowering season from March to November.

**SEED** . . . Gloxinias can be easily grown from seed. Sown from January to August, according to when the flowering is desired. If well handled they will produce good specimens from five to six months. The culture is exactly the same as growing Begonias from seed. For good results they should be grown under glass all year around with slightly higher temperature than Begonias. The soil should be very light. Three-fourths coarse leafmold and one-fourth peat will produce very quick growth. Bone meal mixed with soil before planting and additional feeding with liquid manure as for Begonias when buds begin to develop will give good results.

**TUBERS** . . . For developing large show specimens, tubers should be used, as seedlings will form only few flowers the first year. They can be started in the same way as described for Begonias. Warm and moist temperature should be maintained in the greenhouse during the younger stage of the growth, somewhat cooler and well ventilated when in bloom. *If kept in dry temperature they are subject to aphids and thrips which destroy the young buds entirely.* Occasional fumigating with nicotine before the pests are too noticeable will prevent them from doing too much damage. After the blooming period the foliage turns yellow; they should be dried up gradually and handled the same as Begonias. Storing room for tubers should be frostless.



**GLOXINIA SEED** . . . We offer seed produced by artificial cross-pollination from the best new specimens each year. The standard varieties come true to color. The Tigrina shades give wide variation within each color.

**PRICE** . . . Separate colors of any type 50c per package. Any desirable mixture 50c per package.



# EARLHAM STRAIN OF GIANT MONTBRETIAS

We have imported, directly from the originator in England, a collection of some forty varieties of the new hybrid Montbretias, which under good conditions reach the height of four feet, with individual flowers from two to three inches in diameter. They require slightly richer soil and better cultural conditions than the old type of Montbretias but will repay in full measure for the extra effort. Their brilliant red-gold and copper tones make a splash of color for six weeks during the summer. Excellent as cut flowers, lasting fully two weeks in water. The five following varieties, which we are introducing for the first time in the United States, are the most outstanding and distinct of the entire collection. They are fully as large as His Majesty.

	Price Each	Dozen	Hundred
<i>Cecil</i> : Buff-yellow, with apricot eye; large flowers; very tall, four feet or over . . . . .	\$.20	\$2.00	\$15.00
<i>Jessie</i> : Equally as fine as Cecil but a shade deeper in coloring . . . . .	.20	2.00	15.00
<i>Lord Lambourne</i> : An improvement over Pocomontas, which we used to list, the color being a deeper shade of bronzy-orange-scarlet, with more graceful sprays and taller stems . . . . .	.20	2.00	15.00
<i>Sir A. M. Wilson</i> : A uniform shade of crimson, the deepest color so far achieved in Montbretias. It has a splendid type of growth, with graceful stems. The individual flowers are quite large . . . . .	.20	2.00	15.00
<i>J. A. Fitt</i> : A masterpiece of color, which is a brilliant orange-scarlet self. It is easily the finest Montbretia in existence, named after its originator. It received a first class certificate from the Royal Horticultural Society in England . . . . .	.30	3.00	20.00
<i>His Majesty</i> : The well-known and still one of the most outstanding Montbretias, which is available now at a reasonable price. The flowers, which reach three inches in diameter, are carried in graceful sprays on four-foot stems. Their coppery-orange color blends well with most summer flowers . . . . .	.10	1.00	7.00

**CULTURE OF MONTBRETIAS** . . . The new strain of Earlham Montbretias requires somewhat richer cultivation than the old, small-flowered types of Montbretias. The bulbs are distributed from December to March and should not be kept in a dry state longer than necessary. As a rule, under California conditions, if transplanting is desired they can be dug up in autumn and replanted immediately. In a region where deep frosts prevail, it is advisable to lift them after the frost has cut down the foliage, leaving the soil adhering to the roots, and store them in the basement, where they can be kept thoroughly dry until spring, when planting is again possible. For good results, the soil should be dug up quite deeply, well enriched with bone meal and old, well-rotted manure, before planting. Fresh manures, if used, are often more harmful than beneficial. No additional feeding is required during the growth but a continuous supply of moisture is necessary until the flowering season is over, after which time they can be kept on the dry side so the tubers will be well ripened when the time for lifting comes. They multiply very rapidly if grown in light soil. In heavy soils they will produce strong shoots but the increase is much slower.





# PACIFIC STRAIN OF

Although a comparatively short time has passed since our strain of Delphinium was introduced to the gardening world, the enthusiastic acclaim of amateurs and professionals alike has made us feel that we have contributed a step in the progress of better Delphiniums. At the 1939 Oakland Spring Garden Show, which is the annual flower event of the Pacific Coast, our Delphiniums received the gold medal for the most outstanding display in the show, in open competition with all other spring flowers. These plants were field-grown seedlings in their maiden bloom, dug and balled the day before the show, without being forced in any way. Contrary to the popular practice of naming individual plants, our aim is to produce a group of individual plants resembling each other as closely as possible, keep interbreeding them until the progeny brings a high percentage of specimens true to description and then introduce it as a named series. In this manner we can offer new progressions of each series each year as the progeny always supersedes the parents. The names of our Delphinium series, with the exception of the blues, which have descriptive names, have been chosen from Tennyson's "Idylls of the King."

## NOVELTIES FOR 1940

*Black Knight Series* . . . The darkest of them all. Individual flowers two and one-half to three inches in diameter; of beautiful round form, with heavy velvety texture, which gives the color luminosity and vividness not seen before in Delphinium. Very long, well-formed spikes; a true show flower.

*Bluejay Series* . . . Every Delphinium lover seeks the true blue color, which is so rare in nature and so difficult to obtain. These series are our bid toward attaining it. The color is striking, clear medium to dark blue; very intense and alive, with dark, contrasting bee.

## 1941 NOVELTIES . . . SEED AVAILABLE JULY, 1940

*Cameliard Series* . . . This is a pure lavender self, with white bee, possessing classical perfection of form of the individual flowers, which are very round and flat. Beautifully balanced spikes combine with excellent growing habits.

*Round Table Series* . . . As the name implies, this represents all of the color combinations of the Knights and their Ladies which will eventually be introduced. This year some three hundred different crosses were used to make up this group, combining all the newest color developments and possessing size that will make them invaluable for show purposes.

**PRICE** . . . Cross-pollinated seed . . . \$5.00 per packet; \$2.50 per half packet.

## 1939 INTRODUCTIONS CROSS-POLLINATED SEED

**NAMED SERIES** . . . *Galahad Series* . . . Our greatest achievement in giant whites, fully worthy of its name, which possesses all of the qualities one expects in a fine Delphinium.

*Lancelot Series* . . . A pure lilac self with white bee, an entirely new color in Delphinium, which combines delicacy of color with a graceful form of spike and prolific blooming habit, bringing often as many as three crops in a season.

**PRICE** . . . Cross-pollinated seed . . . \$3.00 per packet; \$1.50 per half packet.



*Bluejay Series*



# DELPHINIUM HYBRIDS

## 1938 INTRODUCTIONS

*King Arthur Series* . . . This is still one of the most brilliant Delphiniums we have so far developed. The color is a rich, royal purple, with a velvety texture and large white bee, and the beautifully-formed, long spikes are carried on thin, woody stems.

*Guinevere Series* . . . A clear pink-lavender self, with white bee; with very large individual flowers averaging up to three inches in diameter. This is a true exhibition type and a beautiful garden plant.

*Summer Skies Series* . . . As the name indicates, this is the blue of a summer sky, with white bees representing fleecy clouds; a color long sought in the hybrid Delphiniums.

**PRICE** . . . Cross-pollinated seed . . . \$2.50 per packet; \$1.75 per half packet.

## STANDARD COLORS

Besides the named series we are offering several groups which are not yet segregated to such a degree that they would come true to color. They are the best we have been able so far to produce in their respective colors and are fully equal in character of growth and size of flowers to the named series. Produced by artificial cross-pollination to intensify the desirable characteristics in the highest degree. It is the same seed we use for our own planting, and by releasing it to the public we feel that we are giving them an equal chance. The percentage of show specimens from this seed is the highest obtainable. The qualities we look for in Delphiniums are not only huge flowers and spikes regardless of other characteristics, but on the contrary we often use plants of smaller size if they have outstanding qualities in color or form. Our aim is to produce large flowers properly proportioned to the size of spikes, so as to maintain balance and retain the grace of the entire plant. Another important feature in our developments is comparative mildew resistance. Over ten acres of seedlings are being grown this year for selection, from which only the finest members combining all the desirable characteristics are retained for seed production. This enables us to produce very high quality seed, giving customers the advantages of the newest developments.

*Lavender Shades* . . . Clear lavender mauves, with white bee.

*Lavender Pastels* . . . Lavenders with smoky tinge in the petals and dark brown or black bee.

*Light Violet Shades* . . . Great variation of light violet tones, ranging from lilac to deep violet.

*Dark Violet Shades* . . . Comprising the deepest color tones in Delphinium, mostly dark bees.

*Light Blues* . . . Ranging from light to medium blue with white, fawn and dark bees.

*Medium Blues* . . . Clearest blues are in this group, with white and dark bees.

*Dark Blues* . . . Ranging from medium to very dark blues, predominately white bees.

*Blue Violet Shades* . . . Richest coloring in Delphinium comprises this group. Combination of dark blue and violet is further intensified with dark bees.

*Clear White* . . . These are slightly different from the Galahad Series, the flowers not being as large; however, they are the purest white, with velvety texture. Very heavy branching and long trusses of flowers makes them ideal for cut flower purposes.

*White—Black Bee* . . . The best whites with dark bees we have been able to so far produce.

**PRICE** . . . \$2.00 per pkg.; \$1.00 per half pkg.; Collection of 5 colors \$8.00; half pkgs. \$4.00; Collection of 10 colors \$16.00; half pkgs. \$8.00.



*King Arthur Series*





*Natural Size Flower of Guinevere Series*

## SELF-POLLINATED SEED

The self-pollinated seed offered on this page is collected only from the outstanding plants and it will bring high uniformity of type and color as described below.

**NAMED SERIES . . .** *King Arthur, Guinevere, Summer Skies.* Price: \$1.25 per packet; 65c per half packet. Collection of three: \$3.50; half packets, \$1.75.

*Lancelot, Galahad . . .* Price: \$1.50 per packet; 75c per half packet. Collection of two: \$2.75; half packets, \$1.40.

*Black Knight, Bluejay, Cameliard, Round Table . . .* Price: \$2.00 per packet; \$1.00 per half packet. Collection of four: \$7.00; half packets, \$3.50.

**STANDARD COLORS . . .** Lavender Shades, Lavender Pastels, Light Violet Shades, Dark Violet Shades, Light Blue Shades, Medium Blue Shades, Dark Blue Shades, Blue Violet Shades, Clear White, White—Black Bee . . . Price: \$1.00 per packet; 50c per half packet. Collection of five: \$4.00; half packets, \$2.00. Collection of ten: \$7.50; half packets, \$3.75.

## DELPHINIUM PLANTING

From March to the end of June and from September to the end of November we are offering strong, young plants in twelve assorted shades as marked for cross-pollinated seed. Transplanted, they will grow rapidly on and bring far better results in a shorter time than the old clumps. We prefer distribution of young seedlings rather than the one- or two-year-old clumps, which very seldom bring good results, as they are quite exhausted and it takes a year at best to get them re-established, during which time the flowers are not at their best. Young seedlings will produce show specimens within four or five months after planting and continue blooming for several years. In California interior valleys where the climate is too warm, autumn planting, September and October, is preferable. Plants having time to establish good root systems during winter will bring beautiful spikes in early spring. Cooler re-

gions will give good results from both autumn and spring planting, except in heavy, cold soils, where spring planting is preferable.

**SEEDLING PLANTS . . .** \$2.00 per dozen; \$15.00 per 100.

*Delphinium Cardinale . . .* Delivery, September to December. The scarlet native Larkspur of California that differs in cultivation from the garden hybrids by requiring a thorough drying up after the flowering season during summer.

*Delphinium Zalil . . .* Delivery, September to December. The best yellow species and a good companion for *Delphinium Cardinale*, requiring the same cultural conditions. This is rare and quite spectacular when well grown.

**PRICE . . .** Strong roots, \$2.00 per dozen; seed, 25c per packet.

### JOIN AMERICAN DELPHINIUM SOCIETY

Beautiful Yearbook containing history of the newest developments in the Delphinium world . . . published annually. Membership \$2.00 per year.

Write to  
THE AMERICAN DELPHINIUM  
SOCIETY  
Ridgefield, Connecticut





# CULTURE OF DELPHINIUM HYBRIDS

**SEED** . . . Delphiniums can easily be grown from seed which can be sown practically any time of the year, according to the climatic conditions, equipment available or time of flowering desired. Under California conditions, for early spring flowers, sow from June to September; midsummer blooms, December to January; and for fall blooms, February to April. In regions with severe winters, the early summer sowing, from June to July, is recommended, so that the little plants are well established before the winter sets in. Otherwise, the most practical time to sow is early spring. Seed can be kept in good condition for several years if kept in air-tight containers in a refrigerator. In fact, it is practicable even with fresh seed to place it between two moist blotting papers and leave it directly under the freezing compartment of the refrigerator for at least a week to induce higher germination. For best results, sow in flats in a mixture of two-thirds coarse leaf-mold and one-third loam, covering slightly with the same mixture, and moisten thoroughly. To prevent evaporation, cover the flats with newspaper and glass until germination takes place. Immediately after the young plants begin to appear, both the glass and the newspaper should be taken off; however, the plants should be kept shaded and kept moist constantly.

**GERMINATION** . . . If the seeds do not germinate 100 per cent and the flats are exposed to strong light immediately after the first few plants have appeared, the rest may not germinate at all. Artificial heat can be used for germination in early spring and it will give far better results than the natural heat in summer. To get the best results in germination, bottom heat is necessary, with a cool temperature overhead. This is well supplied under glass in early spring; however, in summer, due to hot weather conditions, it is usually the opposite and this is why many people have failures even with the very freshest seed. *At temperatures of 85 degrees Fahrenheit and up, the germination is often very poor and what germinates stands a very good chance of being simply cooked.* To prevent this, after the seeds are sown in flats, place them on the floor in a cool room or shed, where they can be kept dark for the first ten days, until germination takes place; then give light and fresh air, but keep them well protected against any drying out. We have repeatedly checked on seeds which were sown under greenhouse conditions in summer or the cool shed method or a well-shaded lath house, and the results in each case were from 20 to 50 per cent better under lath house conditions than under the greenhouse conditions. Under slow, cool germination practically every seed will gradually come up. Under quick, hot conditions only a few will germinate, the rest remaining dormant in the soil. Dampening off will occur only if flats are kept too wet in the greenhouse, without proper ventilation. Watering with a weak solution of Clorox, 2 to 4%, we have found to be the best cure and preventive.

**TRANSPLANTING** . . . When second leaves are developed and before plants are too crowded, prick in flats three inches apart in a mixture of two-thirds sandy loam and one-third leafmold. Keep shaded for two or three weeks; then gradually give more light and, when larger, harden off in full sunlight before planting out in permanent position about two or three feet apart. Open, sunny location is necessary for best development. In shade they will grow too spindly, with only small flower spikes. If too close to walls, they will mildew more than in the open. The ground should be well prepared for planting. A liberal application of well-rotted cow or sheep manure, with a sprinkling of bone meal mixed with the soil, which should be dug a foot deep, will produce fine growth. Heavy, wet soils will require a slight addition of lime. Good drainage and uniform supply of moisture during the growth is essential.

**FEEDING** . . . When the first crop of blooms has faded, cut the flower spikes off just above the foliage and keep slightly dry for two or three weeks, to give the plants time to rest before the new shoots appear above the ground. When this takes place, cut the rest of the old stock off, sprinkle a teaspoonful of ammonium phosphate around each plant, rake it into the soil slightly and water thoroughly. From the new shoots appearing from the ground select two or three of the strongest and break the rest out. The remaining ones will develop into fine spikes again. Do not force a new growth late in autumn; rather keep the plants on the dry side, because if forced into bringing a third crop late in the season the plants will soon exhaust themselves and gradually die out.

**DISEASES** . . . Mildew will attack plants grown close to a wall, or planted thickly together, especially later in the fall. The new "Ortho Mildew Spray," originated by the California Spray-Chemical Corporation, Richmond, California, diluted with water to a 4 per cent strength, will control it perfectly. This spray not only acts as a preventive but will cure heavily-affected plants, as it kills the mildew instantly. It is a light oil and can be applied at any time without burning the foliage, to which it gives a nice, shiny appearance.

## DELPHINIUM CARDINALE AND ZALIL

Sowing directions for the scarlet Larkspur differ slightly from that for the garden hybrids. They cannot be transplanted with bare roots when growing. Sow either in small pots and plant out later without disturbing the root system, or sow in flats in peat, with slight addition of sand only. Peat is the only medium that will stick to the roots so they may be safely transplanted into the field.







# PACIFIC STRAIN OF POLYANTHUS PRIMROSES

As the polyanthus group is the most hardy and easiest to grow of all the primrose family, succeeding practically in every climate, we have concentrated our work on improving this particular type . . . Our aim was to develop a wider and clearer color range, taller stems, and larger size of individual flowers and flower-heads . . . After testing all of the important strains in commerce, we spent years of breeding and selecting from some twenty thousand seedlings each year. Last February we introduced our strain experimentally at the Golden Gate International Exposition on Treasure Island, where the exhibit, although comparatively small, created such interest that our stock was completely sold out within two weeks. This is perhaps the best recommendation our strain could have . . . We were able to produce a sufficient amount of seed this spring by cross-pollinating our best 1939 seedlings of which the individual flowers in some cases exceeded the size of a silver dollar. In March we will have over fifty thousand new seedlings in bloom for distribution.

**SELECTED SPECIMEN PLANTS** . . . Delivery, August and September . . . As specimen plants we offer strong divisions of our breeding stock from the previous season which are the most outstanding developments that we can supply.

**Colors** . . . White, Pink Pastel, Carmine-Rose, Scarlet, Dark Red, Yellow, Gold, Bronze-Apricot, Orange-Flame, Blues.

**New Blends** . . . A combination of unusual and outstanding shades that do not fall into the above classification.

**PRICE** . . . 25c each; \$2.50 per dozen; \$15.00 per hundred.

**SEEDLING PLANTS** . . . Delivery, March and April. During March and April we ship young plants with flowers on, in assorted colors as per selected plants.

**PRICE** . . . \$1.50 per dozen; \$9.00 per hundred.

**SEED** . . . We can offer presently only a limited quantity of seed produced by artificial cross-pollination between our best new seedlings of the season.

**PRICE** . . . \$1.00 per pkt. Approx. 125 seeds. In separate shades or any desired mixture.

Collection of 5 pkts. for \$4.00; 10 pkts. for \$7.50.

## CULTURAL DIRECTIONS

**SEED** . . . If grown from seed, sow in flats in a mixture of coarse leafmold and garden soil approximately half and half, covering only slightly with finely granulated peat. Keep flats fairly moist, cover with glass and keep dark until germination takes place. Give light at the first sign of germination and remove glass a week later. When sufficiently large, transplant in flats in the same mixture of soil and later plant outdoors in a permanent location.

**LOCATION, SOIL AND FEEDING** . . . Eastern exposure with plenty of light, but not too strong sunlight, is the most favorable. They will also grow in comparatively shady places. The best soil for Primroses is a rich, light loam to which can be added a heavy dose of old rotted manure. They require plenty of water at all times, and if one requires strong specimens an additional feeding during the early growth in the spring may be given by sprinkling either ammonium phosphate around the plants or cottonseed meal dug into little trenches between the plants. They should be lifted and divided every second year, otherwise the plants deteriorate in the exhausted ground.

**PESTS** . . . Slugs and snails will attack Primroses. The best preventive is a sprinkling of Bug-Getta between the plants which will eliminate these pests entirely.

## RICHARDIA ELLIOTTIANA

(Yellow Calla Lily)

Beautiful summer flowering plant of simple cultural requirements. Planting time February to end of April. Strong bulbs from November to February.

**PRICE** . . . 25c each; \$2.50 per dozen; \$18.00 per 100.



## CALLA AETHIOPICA

(White Calla Lily)

Planting time July-August . . . The white Calla Lilies require swampy conditions for the best development. The flowering season is during winter months and early spring.

**PRICE** . . . Strong tubers 25c each; \$2.50 per dozen; \$18.00 per 100.





## RANUNCULUS

(Cultural directions on page 23)

We have been inter-breeding the Tecolote and the Australian strain which are the foremost of today and are offering select stock resulting from these crosses . . . All single plants are weeded out so that only uniform select plants are offered in following colors: White and Cream shades, Yellow and Gold shades, Pink and Rose shades, Orange shades, Scarlet shades, New Blends mixed.

**PRICE** . . . Delivery July to November . . . Large tubers \$1.00 per dozen; \$7.00 per 100; Medium tubers 75c per dozen; \$5.00 per 100.

**SEED** . . . 50c per pkt.; \$15.00 per oz.

## ANEMONES

(Improved St. Brigid Strain)

We have an improved Scottish strain of St. Brigid Anemones with large semi-double flowers carried on strong stems with large variety of color combinations. At present we offer complete mixture of all shades ranging from white, blush, lavender, blue, violet, rosy pink, crimson and scarlet.

**PRICE** . . . Strong tubers from July to end of October in mixture only: 75c per dozen; \$5.00 per 100.

**SEED** . . . 50c per pkt.



## CULTURE OF ANEMONES AND RANUNCULUS

**PLANTING TIME** . . . The planting time for regions where mild winters prevail begins from September until December. The earlier they are planted, the larger the specimens will develop. Late plantings are usually forced by the spring warmth into quick blooming without being able to form sufficiently large plants. In regions with severe winters the tubers can be kept in a dry, cool place until early spring, then planted when the ground becomes sufficiently warm.

**SOIL AND FEEDING** . . . The ideal soil is rich, sandy loam heavily enriched with any kind of well rotted manure; however, they will grow well in practically any kind of soil provided they get a good supply of water and some additional feeding. When the growth reaches approximately two or three inches, make small trenches between the rows of plants, sprinkle liberally with either cottonseed meal or fish meal, approximately a teaspoonful to each plant, and again covering with soil, keeping thoroughly moist at all times. This

dose can be repeated again six or eight weeks later when the buds are beginning to appear, after which no additional feeding is necessary.

**SEED** . . . If growing from seed, sow from September to November in flats in a mixture of sandy loam or any light soil and transplant directly into the open when the plants become sufficiently large. If planted early they will form large flowering plants the same season. Anyone who wishes to grow show specimens of *Ranunculus* should keep in view two points: heavy feeding and constant moisture. In dry, poor soils, even the finest varieties of *Ranunculus* will be only poor, small double or single scraggly specimens.

**PESTS** . . . Both *Anemones* and *Ranunculus* are practically free from any kind of pest but the young growth is dearly loved by birds. In small gardens it is advisable to cover beds with wire until the plants are sufficiently large, otherwise, some friendly sparrow will make a very short story of them.



### NERINE

Planting time August-September . . . This charming South African member of the *Amaryllis* family is little known in this country. The brilliant color and beautiful form of its flowers which are produced in umbels during September and October, combined with simplicity of culture will endear it to all gardeners who cherish the rare and beautiful. We have imported all the new hybrids existing presently in Europe, but as the stock is very scarce we offer only one variety in quantity at present.

*Nerine—Fothergilli Major* . . . The king of all species. Brilliant orange scarlet with a gold-dust texture shimmering in sunlight.

**PRICE** . . . Strong bulbs from July to September. \$1.00 each; \$10.00 per dozen.

## CULTURAL DIRECTIONS

**SOIL** . . . After receiving the bulbs, pot up in six-inch pots in a mixture of one-third coarse leafmold, one-third loam with a little addition of sand and bonemeal. Plant the bulbs so that the upper part is exposed out of the ground, press the soil down firmly and water well. Do not water again until signs of growth show but keep fairly moist from then on.

**GROWING CONDITIONS** . . . Keep outdoors in full sunlight until danger of frost, then move either into the cool greenhouse or house where they will continue growing during the winter months. As soon as the weather permits, again take outdoors and by the end of May when the foliage gets yellow, dry off entirely.

**IMPORTANT** . . . Keep absolutely dry during the summer months as otherwise they would not produce flowers. By the first of September give a slight watering and when the buds begin to appear remove the upper part of the soil from the pot, taking care not to disturb the roots, and fill up with a new mixture of soil to which may be added either bonemeal or any complete commercial fertilizer. They will not need repotting and may be grown in the same pots for several years if they are given the dressing with rich soil each year. Their flowering period is September and October, after which the growth commences.



